

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

The following commonly-assigned patent application is hereby incorporated by reference as if set forth in its entirety:

09/409,125 now ABANDONED,

U.S. Patent Application, bearing Attorney Docket No. 99RSS268, entitled "CHIP

5 ABSTRACTION LAYER," filed concurrently.

Turning now to Figure 1, illustrated is an exemplary communications card or system C which may utilize the techniques of the disclosed embodiment as implemented in software on a computing system. In the alternative, the communications card may include an embedded operating system which implements the techniques of the disclosed embodiment.

10 The communications card C includes a line driver 104, a analog front end (AFE) 106 and a data pump 108. The line driver 104 is coupled to the AFE 106, and the AFE 106 is coupled to the data pump 108. The line driver 104, the AFE 106 and the data pump 108 are each coupled to a peripheral component interconnect (PCI) bus controller 110. The communications card C can be a variety of communications devices such as a network interface card (NIC) or a modem.

15 It should be understood that the communications card C is used for illustration and that a number of configurations with less, more or different components are possible. The term communications card should generally be understood to include any card with modem or similar communication capability.

20 Turning now to Figure 2a, illustrated is the Network Driver Interface Specification (NDIS) "miniport" architecture model published by the Microsoft Corporation. Although the techniques of a disclosed embodiment are shown as implemented on a Windows® operating system (OS) and a NDIS platform, it should be noted that the specific OS and platform are not limiting and the disclosed techniques can be extended to other OSs and platforms.

A SmWdmIfSetDeviceParams function is an initialization routine that is called to set any device object flags that cannot be set by the platform interface 324. The flags indicate a device object is ready to process system requests. The SmWdmIfSetDeviceParams function includes the following parameter:

5 IN PDEVICE_OBJECT pDeviceObject.

The pDeviceObject of PDEVICE_OBJECT data type is a pointer to device object created by the SmWdmIfInit function.

10 By employing such a SIAL, software modules and drivers can employ a standard interface and thus be interchanged and updated or modified in less time using fewer programming resources. In addition, software modules and drivers can be ported to a different OS or platform with increased efficiency.

15 A chip abstraction layer (ChipAl) is described in a commonly assigned U.S. patent application, 09/409,125 now ABANDONED, for a system interface abstraction layer, previously incorporated by reference. The system interface abstraction layer and the chip abstraction layer may be implemented in a single driver where the hardware abstraction layer is a lower level driver and the system interface abstraction layer is an upper level driver.

20 The foregoing disclosure and description of the various embodiments are illustrative and explanatory thereof, and various changes in the details of the illustrated apparatus and construction and method of operation including the number and the order of the processing steps may be made without departing from the spirit of the invention.